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Address to:

Box Patent Application   Attorney's Docket No. __SONY-U0446__
Commissioner for Patents
Washington, D.C. 20231   First Named Inventor __YUJI OKACHI__

UTILITY PATENT APPLICATION TRANSMITTAL
(under 37 CFR 1.53(b))

SIR:

Transmitted herewith for filing is the patent application entitled:
INFORMATION PROCESSING APPARATUS HAVING REPLY PRIORITY AND METHOD THEREOF

CERTIFICATION UNDER 37 CFR § 1.10

I hereby certify that this New Application and the documents referred to as enclosed herein are being deposited with the United States Postal Service on this date __October 16, 2000__, in an envelope bearing "Express Mail Post Office To Addressee" Mailing Label Number __EL387335065US__ addressed to: Box Patent Application, Commissioner for Patents, Washington, D.C. 20231.

__Elizabeth Reicker__   _Elizabeth Reicker_
(Name of person mailing paper)   (Signature)

Enclosed are:

1. __X__ Transmittal Form (two copies required)

2. The papers required for filing date under CFR § 1.53(b):
    i. __15__ Pages of specification (including claims and abstract);
    ii. __5__ Sheets of drawings.
        __x__ formal   __ informal

3. Declaration or oath

    a. __x__   Unsigned - Combined with Power of Attorney

ACCOMPANYING APPLICATION PARTS

4. __ An assignment of the invention to __Sony Corporation__ is attached (including Form PTO-1595).

    i. __ 37 CFR 3.73(b) Statement (when there is an assignee)

5. __x__ Power of Attorney - Unsigned - Combined with Declaration

6. __ An Information Disclosure Statement (IDS) is enclosed, including a PTO-1449 and copies of __ references.

7. __ Preliminary Amendment.

8. __X__ Return Receipt Postcard (MPEP 503 -- should be specifically itemized)

9. FOREIGN PRIORITY
    [x] Priority of application no. __P11-315901__ filed on __November 5, 1999__ in __Japan__ is claimed under 35 USC 119.

    The certified copy of the priority application:
    __x__ is filed herewith; or
    __ has been filed in prior application no. __ filed on __, or
    __ will be provided.

    __ English Translation Document (if applicable)

10. FEE CALCULATION

a. __ Amendment changing number of claims or deleting multiple dependencies is enclosed.

CLAIMS AS FILED

	Number Filed	Number Extra	Rate	Basic Fee ($710)
Total Claims	19 - 20	* 0	x $18.00	0
Independent Claims	6 - 3	* 3	x $80.00	240.00
__ Multiple dependent claim(s), if any			$270.00	0

*If less than zero, enter "0".

Filing Fee Calculation . . . . $

50% Filing Fee Reduction (if applicable) $950.00

11. Small Entity Status
   a. __ A small entity statement is enclosed.
   b. __ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
   c. __ is no longer claimed.

12. Other Fees
   __ Recording Assignment [$40.00] $0
   __ Other fees
   Specify _____ $0

Total Fees Enclosed $950.00

13. Payment of Fees
   x Check(s) in the amount of $ 950.00 enclosed.
   __ Charge Account No. 12-1420 in the amount of $__.
   A duplicate of this transmittal is attached.

14. All correspondence regarding this application should be forwarded to the undersigned attorney:

Charles P. Sammut
Limbach & Limbach L.L.P.
2001 Ferry Building
San Francisco, CA 94111
Telephone: 415/433-4150
Facsimile: 415/433-8716

15. Authorization to Charge Additional Fees

   X The Commissioner is hereby authorized to charge any additional fees (or credit any overpayment) associated with this communication and which may be required under 37 CFR § 1.16 or § 1.17 to Account No. 12-1420. **A duplicate of this transmittal is attached**.

LIMBACH & LIMBACH L.L.P.

October 16, 2000
(Date)

By: _____
Charles P. Sammut
Registration No. 28,901
Attorney(s) or Agent(s) for Applicant(s)

Attorney Docket No. SONY-U0446
[SOOP1446US00]

INFORMATION PROCESSING APPARATUS HAVING REPLY PRIORITY AND METHOD THEREOF

BACKGROUND OF THE INVENTION

5   1. Field of the Invention

This invention relates to an information processing apparatus for replying to inquiries from customers in accordance with the reply priority assigned to each of the inquiries and method thereof.   Further this invention relates to a recording medium readable by a computer apparatus and recorded a

10   computer program for carrying out such information processing having reply priority.

2. Description of the Related Art

In recent years, various people become to use information terminals or personal computers owing to the remarkable development of the information

15   processing industry field.   As many people become to operate personal computers like this, many inquiries about operations of the personal computers are done to support centers of computer makers or computer shoppers from customers of these personal computers.   In addition, even experts of computer system developer ask to these support centers in order to break off troubles

20   upon development of computer system.

In the support center, such service to take care of inquiries including claims from the customers for general products such as personal computers are started by priority with payment.   In case of replying to such inquiries from the customers by telephone, the number of telephone lines has to be increased

25   depending on the priority for the inquiry.   Namely, the number of reply stuffs is changed in accordance with the reply priority of the inquiry in the support center.   Further in the support center, in consideration of impossibility of proper reply by a primary replier (help desk), a secondary replier having more technical knowledge is to be prepared.   In such case, contents of the inquiry are

30   directly delivered to the secondary replier after examined by the primary replier (help desk), and the secondary replier takes care of the contents of the inquiry.

But the inquiries to the support center increase year by year, and there are many cases where the primary replier cannot finish replying to all inquiries timely due to excess amount of the inquiries.   In such case, some inquiries are

35   also delivered to the secondary replier without examination by the primary replier, but the secondary replier also has many high technical inquiries to reply so that it is impossible for the secondary replier to reply to the inquiries properly and quickly by only delivering such inquiries directly from the primary

1

replier to the secondary replier without priority information. In other words the secondary replier does not understand the reply priority of the contents of the inquiry and accordingly, as the result, the secondary replier does reply just in time series of the incoming inquiries.

5 The contents of the inquiry related to complaints that the secondary replier has to reply often include important and technically difficult matters that cannot be replied by the primary replier, so that if the reply to such inquiries takes time or includes mistakes, then these troubles and complaints become more complex.

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SUMMARY OF THE INVENTION

Accordingly, in order to overcome the above mentioned problems, it is an object of the present invention to propose an information processing apparatus for replying to inquiries from customers in accordance with reply priority and method thereof. Further this invention relates to a recording medium recorded a computer program in readable form by a computer apparatus, wherein the computer program includes function for carrying out such reply processing with reply priority.

Accordingly a primary object of this invention is to present a reply system for replying to inquiries (information request) from customers and the reply system comprises a priority information storing means for storing information relating to reply priority; and a reply means for replying to the inquiry in consideration of the reply priority given to the inquiry.

A secondary object of this invention is to present a method for replying to inquiries from customers, wherein the method comprises the steps of: storing reply priority information upon replying to an inquiry assigned to each inquiry at every time when each of the inquiry is done; and replying to each of the inquiry in consideration of the reply priority information when the inquiry occurs.

A third object of the present invention is to present an information recording medium recorded a computer program readable by a computer, the program comprises the steps of: storing reply priority information upon replying to an inquiry assigned to each inquiry at every time when each of the inquiry is done; and replying to each of said inquiry in consideration of the reply priority information when the inquiry occurs.

A forth object of the present invention is to present an information transmitting medium for transmitting a computer program having function to reply to information, the computer program executes the steps of: storing

2

priority information upon replying to the information assigned to each information at every time when each of the information is done; and replying to each of the information in consideration of the priority information when the information occurs.

Accordingly, according to the construction of this invention as described above, the reply priority information storing means stores information relating to reply priority upon reply corresponding to each of an inquiry from a customer. When the customer inquires to the help desk, the reply means replies to the inquiry from the customer in consideration of the reply priority assigned to the inquiry. Accordingly, the reply to the customer is done based on not in the inquiring order but based on the reply priority to be set to each of the inquiry. On this account if the reply priority is properly set to the inquiry, quick and proper reply is always possible to the customer who makes the inquiry. Further, even if an inquiry from the customer is important inquiry, a quick and adequate reply is done only by setting the reply priority of the inquiry of the priority information storing means.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

Fig. 1 is one embodiment of a system configuration of the present invention including a communication network;

Fig. 2 is a general hardware configuration of a computer system applied to a help desk system, a secondary reply system and a computer of the customer;

Fig. 3 is a software configuration for the help desk system and the secondary reply system in a support center;

Fig. 4 is a flow chart showing operation of the help desk system and the secondary reply system in a support center; and

Fig. 5 is a processing concept showing the operation of the help desk system and the secondary reply system in a support center.

DESCRIPTION OF THE PREFERRED EMBODIEMENTS

The following is one of suitable embodiments of this invention, and many desirable and technical restrictions are stated, but the scope of this invention is not limited to these configuration so long as there is not a mention in particular to limit this invention in the following discussion.

Fig. 1 is a construction of an information reply system constituted based on a network system 10 including a help desk system 1 of this invention.

The network system 10 in Fig. 1 is one example of the configuration that a customer 5 does an inquiry to a help desk (primary replier) 11 through a network 3, for example, and alternatively a customer 5 may be asking to the help desk 11 directly at a support center or indirectly on the telephone, for example.

For example, the network system 10 has more than one computer 7, afore-mentioned network 3, the help desk system 1 and preferably a secondary reply system 9. This help desk system 1 and the secondary reply system 9 constitute a support center 39, for example.

The each computer 7 is a personal computer as one example of an electronic device (or apparatus) which the customer 5 uses. The electronic device (computer 7) mentioned here has a function to connect to the network 3 at least and to connect to the help desk system 1 for the inquiry. In the computer 7, in addition to a basic software such as an OS (Operating System) an application software such as an e-mail software to transmit and receive electronic mails, for example.

The customer 5 is a person who makes an inquiry about indistinct matter regarding the operation of his apparatus to the support center 39. Of course there are a plurality of customers 5 each having possibility for making inquiry to the support center 39. The contents of the inquiry (Information Request) and their importance are respectively different in every customer 5, and the replies should not be done in time sequence of the occurrence of the inquiries.

The network 3 may be an Internet, an Intranet or a LAN (Local Area Network), for example. The network 3 is connected to more than one computer 7, the help desk system 1 and the secondary reply system 9 through a predetermined transmission line. The network 3 is required only to be able to communicate data among electronic devices such as computers 7, the help desk system 1 and the secondary reply system 9, and a wireless data communication system is also available in stead of such wired network 3.

The help desk system 1 is a computer operated by the primary replier (help desk) 11 to reply to the inquiry from the customer 5. The help desk system 1 is a system to reply to the customer 5 who makes the inquiry by E-mail (Electronic mail), for example. In this help desk system 1, in addition to the basic OS, a software program for transmitting and receiving the E-mail, a database software program and a software program having a function for replying to the inquiry from the customer 5 are installed. In this case, the software program having the function for replying to the inquiry may include

the database software program as above mentioned for managing such as appointed tables to be mentioned later. The software program having the function for replying to the inquiry is a software program for controlling an operation of the help desk system 1, for example. The help desk system 1 replies to a normal inquiry from the customer 5 and when the problem of the inquiry is technically difficult for solution at the help desk system 1, a notice for such difficult inquiry is transferred to the secondary replier 13 of the secondary reply system 9. In this case, the notice is reported to the secondary replier 13 with revised reply priority by the help desk 11. Accordingly the secondary replier 13 can reply precisely and quickly to the inquiry from the customer 5 in accordance with the revised reply priority.

A particular matter of this invention is that the reply priority information is included in the notice to be informed to the secondary replier 13 in addition to the contents of the inquiry. The reply priority mentioned here is assigned to each inquiry information requested from the predetermined customer 5 based on a customer priority assigned to each customer 5 and determines a reply order or reply priority. A rule for setting this reply priority is assigned to the help desk (primary replier) 11. For example, the contents of the inquiry from the customer 5 are examined by the help desk 11 at first, then the reply priority is determined, in consideration of the customer priority assigned to respective customer 5, based on the importance of the contents of the inquiry, the number of inquiries to the particular inquiry not replied yet, and the necessity of a quick response of the inquiry.

Next, the secondary reply system 9 is a system that is working on a computer operated by the secondary replier 13. In this secondary reply system 9, in addition to a basic software such as an OS, at least a software for transmitting and receiving the E-mail is working. The secondary reply system 9 is arranged in order to solve and to reply to the contents of the inquiry that are difficult to solve and to reply by the help desk 11. The secondary replier 13 recognizes through the secondary reply system 9 that there are inquiries that are not able to reply by the help desk 11 via the notice of the E-mail from the help desk system 1. Of course, it is needless to say that such notice may be done by oral or other way.

Fig. 2 is a block diagram showing one example of a hardware construction of the help desk system 1 in Fig. 1. Because the computer 7 and the secondary reply system 9 are almost the same hardware constructions as that of the help desk system 1, so that the explanation of the computer 7 and the secondary reply system 9 are omitted and only the help desk system 1 is

5

explained as one representative example of these computer 7, the help desk system 1 and the secondary reply system 9 in the following discussion. For example, the help desk system 1 has a control section 21, a display section 23, an input section 25, a storage section 29 and an IF (Inter-Face) section 31.

5   The control section 21 is connected to the display section 23, the input section 25, the storage section 29 and the IF (Interface) section 31, respectively. The control section 21 includes a CPU (Central Processing Unit), for example, and the control section 21 controls the display section 23, the input section 25, the storage section 29 and the IF section 31 to be connected thereto. The

10   display section 23 is a liquid crystal display or a CRT (Cathode Ray Tube) display, for example. The input section 25 includes an information entering device such as a keyboard or a mouse or something like that. The storage section 29 is a magnetic recording disc device such as hard disc system as a large scale recording apparatus and stores data for the above mentioned

15   database. In this case, the storage section 29 may be information recording medium such as an optical disc or a magneto-optical disc other than above. In addition, for example, the storage section 29 may contain a semiconductor memory as working area of the control section 21 and as working area of each of the above mentioned respective programs. The IF section 31 includes a

20   network interface card, for example, and has a function to connect the help desk system 1 to the network 3.

Fig. 3 is a system configuration showing one example of the help desk system 1 in Fig. 1. The help desk system 1 has a priority information table 15, a reply priority setting section 37, a reply section 35 and a data

25   transmitter/receiver section 33. In the priority information table 15, a priority information relating to the customer priority assigned to each of registered customer and reply priority upon replying to the inquiry done by the customer 5 who takes predetermined registration are stored. The customer 5 who is not registered in the priority information table 15 can not receive the support

30   service. The reply priority setting section 37 can set the reply priorities to every inquiries based on the customer priority, and the priority information 15a including the reply priorities is stored the priority information table 15. In this case, the priority setting section 37 may set the reply priority to each of the contents of the inquiry, for example.

35   The reply section 35 works by operation of the help desk 11, and replies to the inquiry based on the reply priority as stated above, for example. To be more concrete, the reply section 35 searches corresponding examples stored in the inquiry information managing section 17 (to be explained later) based on

the contents of the inquiry as a search key.

The data transmitter/receiver section 33 includes the E-mail software, for example, executes communications between the inquiring customer 5 and transmits thus obtained reply to the customer 5. The network system 10 including the help desk system 1 is configured as mentioned above, and reply method for such inquiry is explained next with reference to Figs 1 to 5.

Fig. 4 is one example of the flowchart in which the customer 5 does an inquiry to the help desk 11, and Fig. 5 is an image figure for showing one example of work process in which the customer 5 does an inquiry to the help desk 11.

For example, the customer 5 purchases an electronic device of a specified maker, and becomes a user of the electronic device. Operations of the recent electronic device becomes more complex and difficult while being equipped with high performances, and accordingly the customer 5 has to frequently inquire to the support center 39 of the specified maker of the electronic device. In such cases, there is the case that on the other hand operating instruction is difficult that an electronic device becomes high performance of late years,

The help desk system 1 is arranged in the support center 39 in order to reply to such inquiry from the customer 5. In addition, a secondary reply system 9 together with a secondary replier 13 is further provided in the support center 39 in order to reply to the inquiry that cannot be replied by the help desk (primary replier) 11 due to the difficulty of the inquiry. The customer 5 asks to the help desk 11 by the E-mail, for example, at an inquiry step ST1. Such inquiry from the customer 5 may be done by telephone or directly at a reception desk of the support center 39.

In the help desk system 1, the help desk 11 searches the customer of the inquiry in the priority information table 15, and judges if the customer 5 is a registered customer in the priority information table 15 at a confirmation step ST2. And if the customer is the registered customer, the registration of the customer 5 is confirmed and if it is not, the customer 5 is noticed that he or she is not a registered customer and ask to register by taking a predetermined registration procedure. As shown in Fig. 4, the help desk 11 searches the inquiry information 17a stored in the inquiry information management section 17 with the contents of the inquiry from the customer 5 as a search key, and further the help desk 11 registers such contents of the inquiry from the customer 5 in the inquiry information 17a at search & adding step ST3. The inquiry information management section 17 may consist of an intranet bulletin

7

board working in the computer of the help desk system 1, for example. This intranet bulletin board may be constituted by a group ware system or a World Wide Web (WWW) system, for example.

The inquiry information management section 17 stores and manages the inquiry information 17a and supplies the solution method included or stored in the inquiry information 17a in response to the inquiry from the help desk 11. The inquiry information management section 17 stores the inquiry information 17a including past settled solution method and a history of the inquiry.

Namely, at first the help desk 11 inquires to the inquiry information 17a and searches the past inquiry, and if there is the same inquiry in the past, the same solution registered in the inquiry information 17a is reported to the customer 5 as a reply. For example, the reply "confirm power supply" or the reply "confirm a cable" in the inquiry information 17a is reported or notified to the customer 5 through the help desk 11 as a reply for the inquiry "cannot print" in Fig. 5. If there is the same inquiry in the inquiry information 17a but no solution is registered, this means that the reply to the previous inquiry is not answered yet. Namely this corresponds to a "not replied yet" for the inquiry "cannot copy" in the inquiry information 17a in Fig. 5, for example.

The reply priority to the inquiry is determined by a calculation rule as shown below at the reply section 35 in Fig. 3. As a numeric value becomes larger, the priority in Figs. 4 & 5 has higher priority.

The reply priority is calculated by only adding each customer priority assigned to each of the inquiry information from a generally registered customer or a specially registered customer in a first example of the priority calculation rule. As shown in Fig.4, each customer has own customer priority point as stored in the priority information 15a. Suppose the customer is "A" and " B" in Figs. 4 & 5 and both customers A and B ask the same contents of the inquiry, for example. In this case the reply priority to the contents of this inquiry is calculated as 0+1=1. In addition, the reply priority becomes 1+1=2 if, for example, if those customer are "B" and " C". Further in the case where the same content of the inquiry are transmitted by customers "B", " C" and "D", and received by the primary replier 11, the calculated reply priority becomes 4 by the calculation 1+1+2=4. Accordingly among three examples, the last case has the highest reply priority and should be replied at first among three cases.

In a second example of the priority calculation rule, the reply priority is changed in accordance with each priority assigned to each of the inquiry information from a general customer or a specified customer and the order of the same contents of the inquiry done to the support center 39.

Suppose the customer is "A" and " B" in Figs. 4 & 5 and the customer "B" asks the same contents of the inquiry after the customer "A", for example. In this case the reply priority of the contents of the inquiry is calculated as (customer priority for the customer "A") x 1 (first inquiry) + (reply priority for the customer "B") x 2 (second inquiry) = 0 x 1 + 1 x 2 = 2.

In addition, if the customer " C" asks the same contents of the inquiry after the customer "B", for example. In this case the reply priority of the contents of the inquiry is calculated as (customer priority for the customer "B") x 1 (first inquiry) + (customer priority for the customer "C") x 2 (second inquiry) = 1 x 1 + 1 x 2 = 3. Further if the customers "B", "C" and "D" inquire the same contents to the support center 39 in this order, the finally determined reply priority becomes 1 + 1 x 2 + 2 x 3 = 9. Accordingly among three examples, the last case has the highest reply priority and should be replied at first among three.

In addition, in the another case for the priority calculation rule, the reply priority may be determined based on a company or a department of a company to which the customer belongs. Further in this case, the inquiry from the same company and the department may not be considered in calculating the reply priority. As further another example of the calculation rule of the reply priority, an inquiry route (E-mail, Telephone, etc) of the inquiry and the time of day of the inquiry may be considered when deciding the reply priority. The help desk 11 notifies to the secondary replier 13 the search result (for example, the contents of the inquiry and the reply priority thereof) at a notice step ST4 if the notice is necessary. The notice is done or is not done in the following manner.

(1) The notice to the secondary replier 13 is necessary.

    * When a new inquiry for the secondary replier 13 is done.

    * When the customer 5 of higher priority asked the same inquiry which is not replied yet.

(2) The notice to the secondary replier 13 is not necessary.

    * When the reply priority for the inquiry does not change greatly as a result that customer 5 having low customer priority newly does an inquiry to the same inquiry already registered but not replied yet.

When the above described new inquiry is done, the help desk 11 writes on the intranet bulletin board about the inquiry from the customer 5 and notifies to the secondary replier 13 the calculated reply priority of the inquiry. The secondary replier 13 who is informed the inquiry from the help desk 11 confirms the inquiry and prepares a reply to the inquiry at a confirmation &

reply step ST5.

When the secondary replier 13 finds a solution for the inquiry, the solution for the inquiry is written in the inquiry information management section 17. Further the secondary replier 13 informs to the help desk 11 who transfers the inquiry at a reply step ST6. Then, the help desk 11 refers to the history of inquiry information managed in the inquiry information management section 17, and report it to the customer 5 who does the inquiry at a reply step ST7. When there is another customer who does the same inquiry in addition, the reply is also served to such another customer.

According to above described embodiment of this invention, following effects can be expected. For example, according to the above described embodiment of the present invention, the customer 5 can obtain necessary information not in the order of the inquiring sequence but based on the calculated reply priority. On this account if appropriate reply priority is set and stored in the priority information table 15, the customer 5 can receive a quick and appropriate reply to his or her inquiry from the support center 39. For example, even if the inquiry from the customer 5 is very important inquiry, such inquiry is also replied quickly and adequately only by properly setting the reply priority of the priority information table 15.

In addition, according to above described embodiment of the present invention, the reply priority of the priority information table 15 is set and revised by the reply priority setting section 37, the reply to the customer 5 is done quickly and adequately. Of course the reply section 35 checks whether the customer 5 of the inquiry is a registered customer in the priority information table 15, and the reply is done only to the registered customer.

Further according to above described embodiment of the present invention, the reply section 35 acquires the solution method stored in the priority information table 15 when there occurs an inquiry from an arbitrary customer. Then replies to the customer using thus acquired solution method. Accordingly the any registered customer 5 can receive the proper reply that is appropriate as well for the inquiry.

In addition, according to the above described embodiment of the present invention, if the reply section 35 judges that a solution method for the inquiry from the customer is not stored in the priority information table 15, the reply priority of the inquiry from the customer 5 is changed and thus revised reply priority is notified to the secondary reply system 9 with the contents of the inquiry by way of the reply section 35 and the data transmitter/receiver section 33 controlled by the reply section 35. Accordingly the secondary reply system 9

10

can reply quickly with appropriate order after having recognized reply priority of the customer 5.

According to the present invention:

1) The support center 39 can reply to the inquiry from the customer 5 without increasing the number of the help desk 11 by assigning customer priority to each customer 5; and

2) The help desk system 1 can alter the reply priority of the inquiry in accordance with the number of the customers 5 doing the same inquiry.

Accordingly, the help desk system 1 of the present invention can reply to the inquiry from the customer 5 quickly and appropriately.

By the way, this invention is not limited to the embodiment as mentioned above. For example, the help desk 11 regularly generates the inquiry information 17a accumulated in the inquiry information management section 17 as a help file 19 as shown in Fig. 4. Thus generated help file may be regularly distributed to some or all of the customers. In this case the help desk system 1 may regularly distribute the help file 19 reflected the history of the inquiry, solution methods for the inquiry and the number of the same inquiry.

The information such as the priority or the number of times for the same inquiry may be reflected to a reply priority for search using the help file 19. In other words this information may be used as a reference to coordinate position of information as hardware-like data alignment in case of searching.

The program having inquiry reply function as described above may be stored in an information recording medium such as a flexible magnetic disc, a CD (Compact Disc : trademark) or a DVD (Digital Versatile Disc). In addition, the above mentioned program may be recorded in an information recording medium installed in a computer as an electronic appliance connected to a transmission medium (either cable or wireless) as a network, and the program is downloaded to a computer as an electronic appliance of the customer through the network.

What is claimed is;

1. An information processing apparatus for replying to an inquiry comprising:

means for storing reply priority information assigned to each inquiry; and

means coupled to said reply priority information storing means for replying to each of said inquiry in consideration of said reply priority information.

2. An information processing apparatus as claimed in Claim 1, further comprising:

means coupled to said reply priority information storing means for setting reply priority to said inquiry upon reception.

3. An information processing apparatus as claimed in Claim 1, further comprising:

means coupled to said replying means for storing past and new inquiries together with their solutions to respective inquiry.

4. An information processing apparatus as claimed in Claim 3, further comprising:

means coupled to said reply priority information storing means for communicating to said replying means, and

second reply means, wherein

when said inquiry is already stored but the solution for said inquiry is not stored in said past and new inquiry storing means, the reply priority for the inquiry is revised to be higher value and thus revised reply priority is transferred to said second reply means together with the inquiry.

5. An information processing system, comprising:

an electronic device for transmitting/receiving information;

a communication network to be coupled to said electronic device for communicating said information there-through; and

reply means coupled to said communication network for executing a processing relating to said information based on reply priority assigned to said information and for transmitting the result of said processing to said electronic device by way of said communicating network.

6. An information processing system as claimed in Claim 5, further comprising:

means coupled to said reply means for setting priority upon replying to a received information.

7. An information processing system as claimed in Claim 5, further

comprising:

means coupled to said reply means for storing solutions for the received information.

8. An information processing system as claimed in Claim 5, further comprising:

means coupled to said reply means for communicating to said replying means, wherein

when the solution for said information is not stored in said solution storing means, the reply priority for the information is revised and thus revised reply priority is supplied to said reply means.

9. An information processing system, comprising:

an electronic device for transmitting/receiving information;

a communication network to be coupled to said electronic device for communicating said information from said electronic device;

a first reply means coupled to said network for executing a processing relating to said information based on reply priority assigned to said information and for transmitting the result of said processing to said electronic device by way of said communicating network; and

a second reply means coupled to said first reply means for processing said information transferred from said first reply means and for transferring thus processed result to said first reply means.

10. An information processing system as claimed in Claim 9, wherein said electronic device is a computer device.

11. An information processing system as claimed in Claim 9, wherein said electronic device is a telephone device.

12. An information processing system as claimed in Claim 9, wherein when said information is already received but is remained unsolved, the reply priority for the information is revised to be higher value at said first reply means.

13. Method for processing information having priority concept comprising the steps of:

storing reply priority information upon replying to an inquiry assigned to each inquiry at every time when each of said inquiry is received; and

replying to each of said inquiry in consideration of said reply priority information when said inquiry is received.

14. Method for processing information as claimed in Claim 13, further comprising the step of:

setting said reply priority information upon replying to an inquiry by

priority setting means.

15.   Method for processing information as claimed in Claim 13, further comprising the step of:

storing solution methods for solving inquiry in a solution storing means;

revising the reply priority for the information when the solution for the information is not stored in said solution storing means; and

communicating to said replying means, wherein

said revised reply priority is supplied to said replying means in said communication step.

16.   An information recording medium recorded a program readable by a computer, said program comprising the steps of:

storing reply priority information upon replying to an inquiry assigned to each inquiry at every time when each of said inquiry is received; and

replying to each of said inquiry in consideration of said reply priority information when said inquiry is received.

17.   An information recording medium as claimed in Claim 16, said program further comprising the step of:

setting said reply priority information upon replying to an inquiry by priority setting means.

18.   An information recording medium as claimed in Claim 16, said program further comprising the step of:

storing priority information upon replying to an inquiry assigned to each inquiry at every time when each of said inquiry is done; and

replying to each of said inquiry in consideration of said reply priority information when said inquiry is received.

19.   An information transmitting medium for transmitting a computer program having function to reply to an information, said computer program executes the steps of:

storing reply priority information upon replying to an inquiry assigned to each inquiry at every time when each of said inquiry is received; and

replying to each of said inquiry in consideration of said reply priority information when said inquiry is received.

14

ABSTRCT OF THE DISCLOSURE

An information processing apparatus for replying to an inquiry from a customer in accordance with a reply priority and method therefore. In this information processing apparatus, the reply to the inquiry from the customer is done in accordance with the reply priority assigned to each of the inquiry. The reply priority is determined based on customer priority, contents of the inquiry and the repeated number of the inquiry remained unsolved.
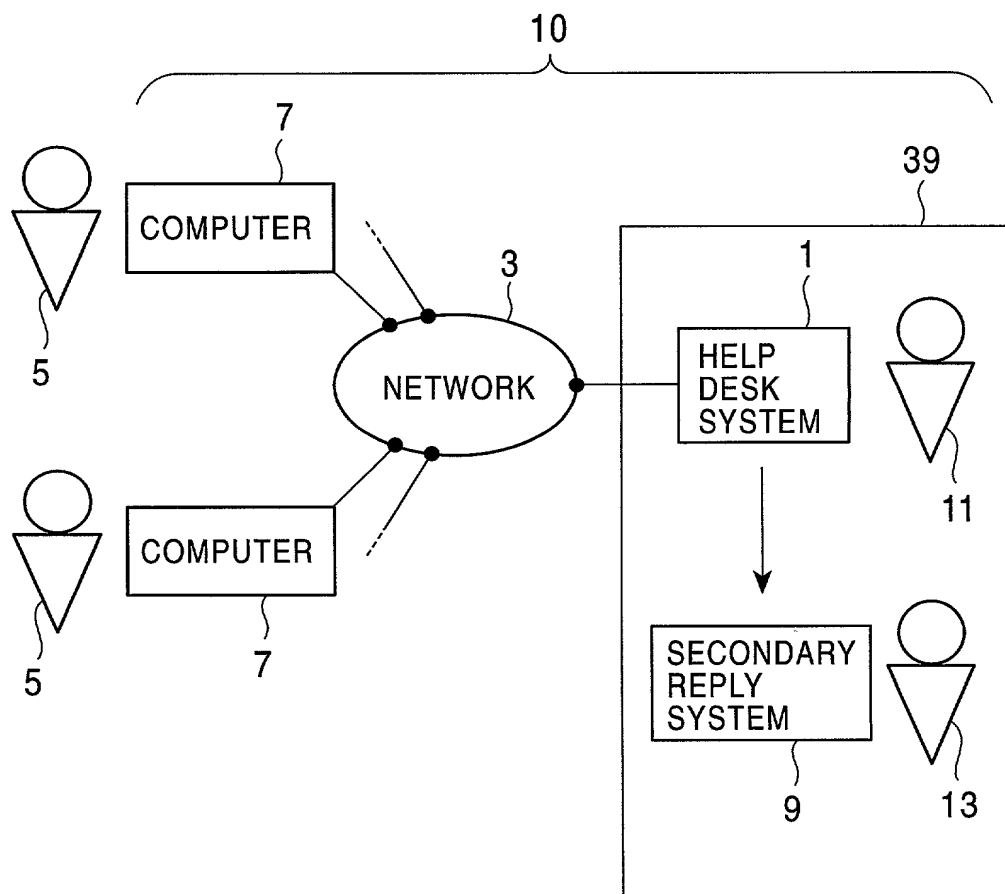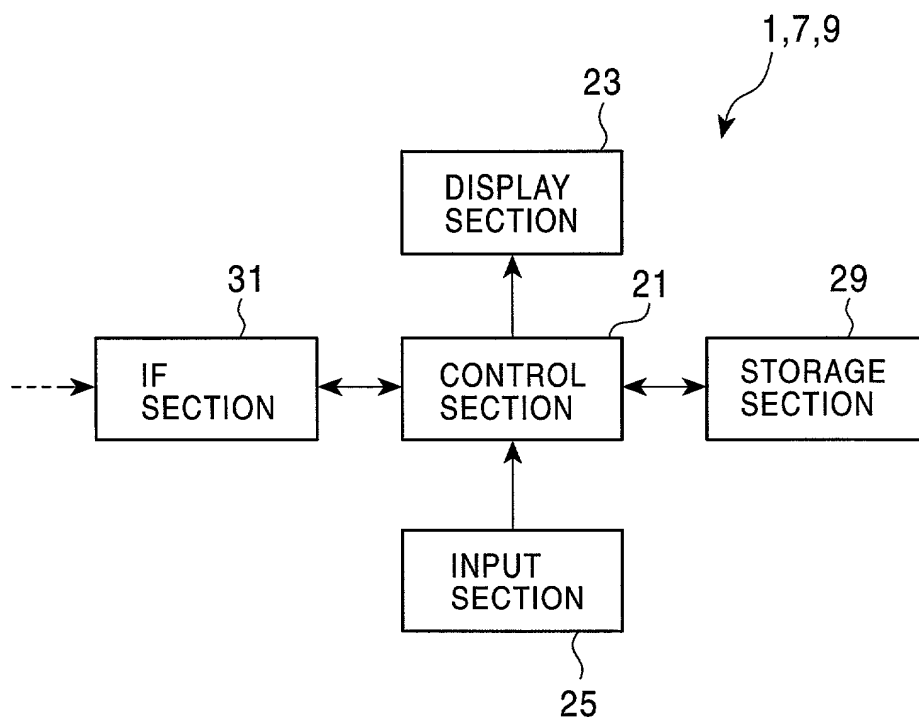
S00P1446 US00

FIG. 1

FIG. 2

1,7,9

FIG. 3

FIG. 4

FIG. 5

CUSTOMER 5

7

PRIORITY
INFORMATION
TABLE 15

A : 0
B : 1
C : 1
D : 2

15a

17

INQUIRY
INFORMATION
MANAGING
SECTION

can not print
confirm power
confirm cables
can not copy
not reply yet

17a

ST1 ST7

ST2

1

ST3
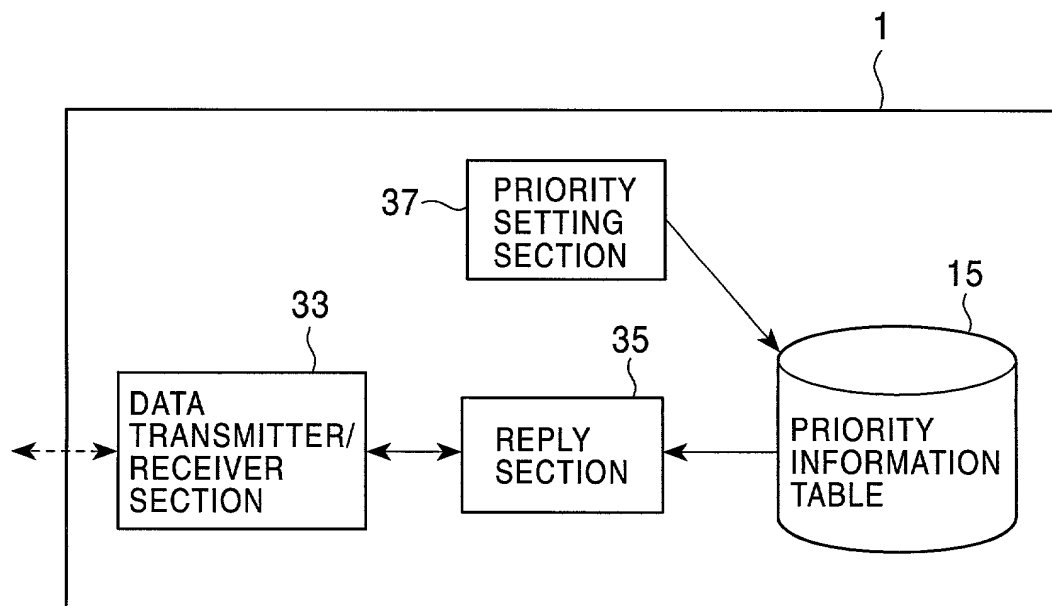
ST5

HELP DESK

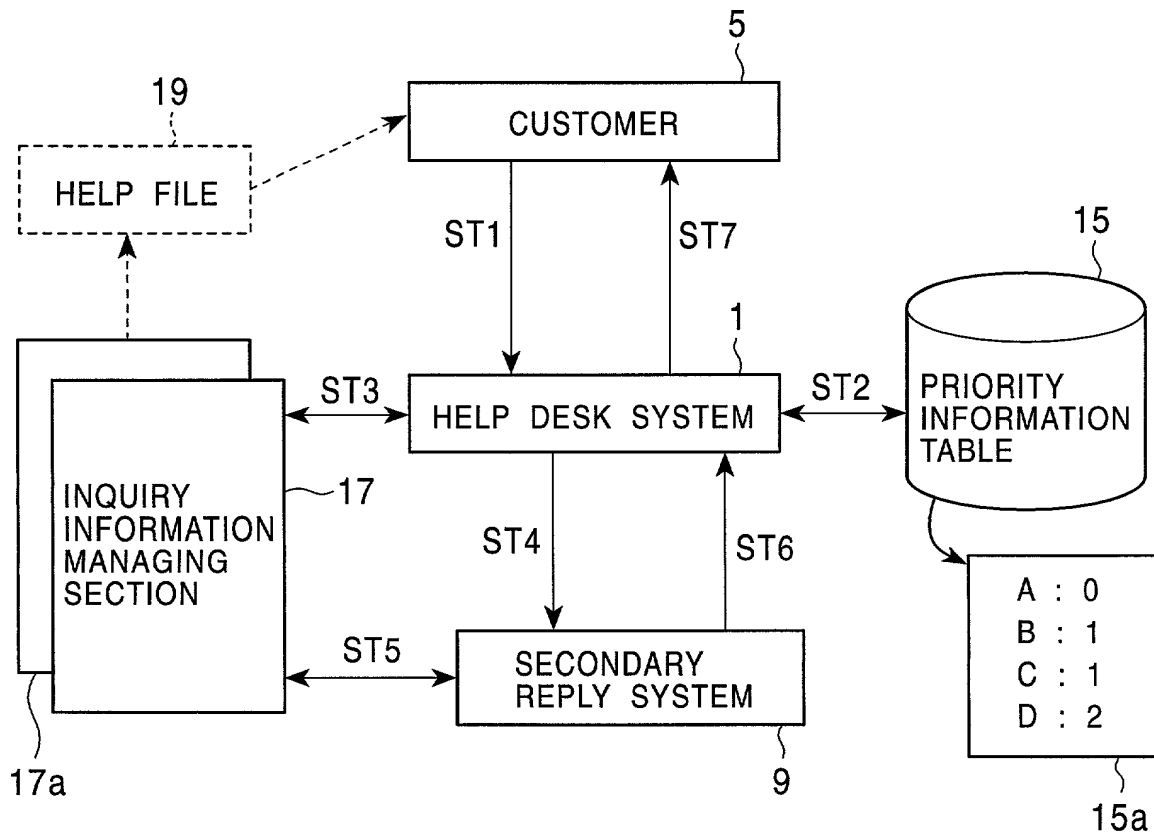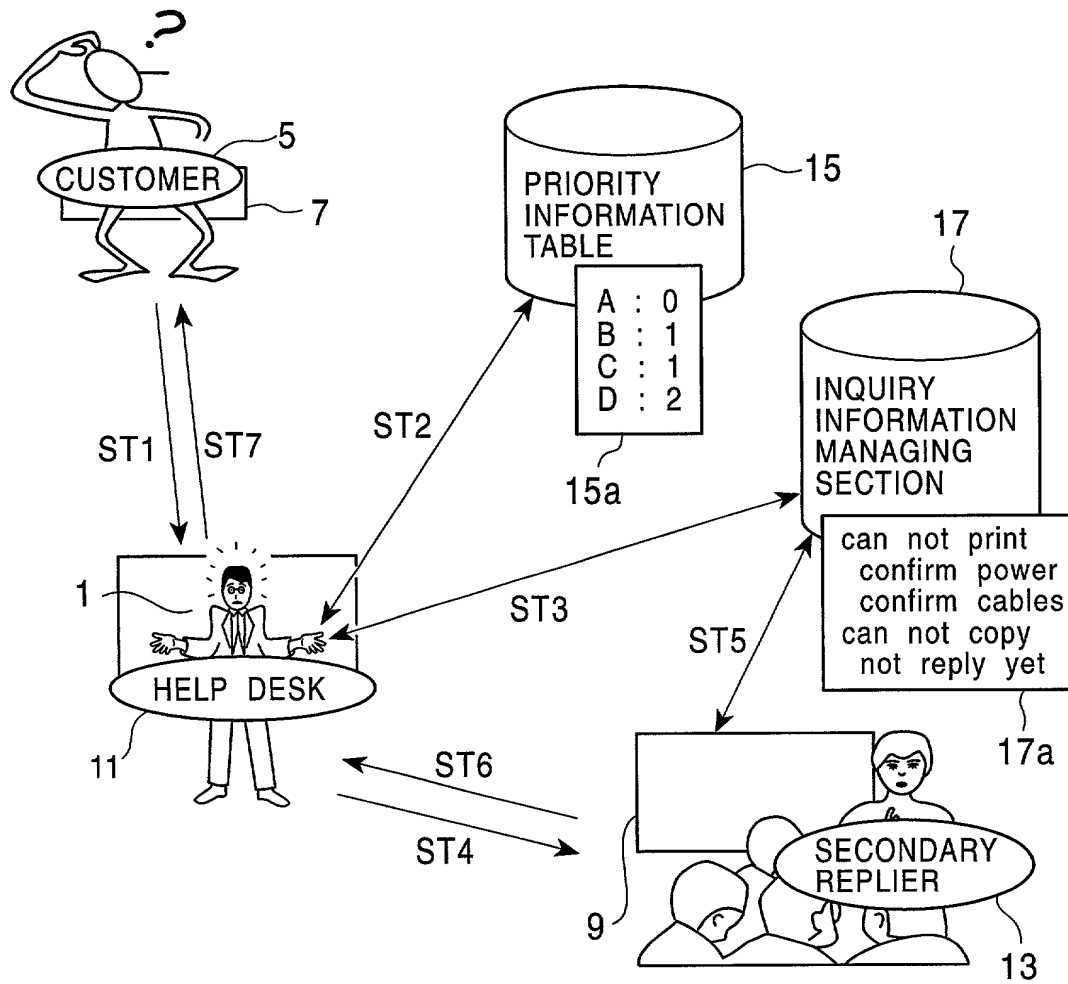11

ST6

ST4

9

SECONDARY
REPLIER

13

SONY-U0446   BY EXPRESS MAIL NO. EL387335065US

Declaration and Power of Attorney For Patent Application
特許出願宣言書及び委任状

Japanese Language Declaration
日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。	As a below named inventor, I hereby declare that:
私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。	My residence, post office address and citizenship are as stated next to my name.
下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。	I believe I am the original, first and sole inventor (if only one named is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled. INFORMATION PROCESSING APPARATUS HAVING REPLY PRIORITY AND METHOD THEREOF
上記発明の明細書（下記の欄でx印がついていない場合は、本書に添付）は、 ☐ ＿月＿日に提出され、米国出願番号または特許協定条約国際出願番号を＿＿＿＿＿とし、（該当する場合）＿＿＿＿＿ に訂正されました。	the specification of which is attached hereto unless the following box is checked: ⎩⎤ was filed on ____ as United States Application Number or PCT International Application Number ____ and was amended on _____ (if applicable).
私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。	I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.
私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。	I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.
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Prior Foreign Application(s) 外国での先行出願	Priority Not Claimed 優先権主張なし
	5 November 1999 ___ (Day/Month/Year Filed) （出願年月日）
P11-315901 Japan (Number) (Country) （番号） （国名）	

Japanese Language Declaration
日本語宣言書

(Number) （番号）	(Country) （国名）	(Day/Month/Year Filed) （出願年月日）

私は、第３５編米国法典１１９条 (e) 項に基いて下記の米国特許出願規定に記載された権利をここに主張いたします。	I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.
(Application No.) （出願番号）　　　　　　　　　　(Filing Date) （出願日）	(Application No.) （出願番号）　　　　　　　　　　(Filing Date) （出願日）

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(Application No.) （出願番号）　　　　　　　　　　(Filing Date) （出願日）	(Status: Patented, Pending, Abandoned) （現況： 特許許可済、係属中、放棄済）
(Application No.) （出願番号）　　　　　　　　　　(Filing Date) （出願日）	(Status: Patented, Pending, Abandoned) （現況： 特許許可済、係属中、放棄済）

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Japanese Language Declaration
日本語宣言書

| 委任状： 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。（弁護士、または代理人の氏名及び登録番号を明記のこと） | POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark office connected therewith (*list name and registration number*) |

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Veronica C. Devitt	29,375	Kathleen A Frost	37,326	Robert M McConnell	46,912
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